US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Needs & Problems Addressed:

- Lack of complete information in geomorphic assessments does not allow USACE decision-makers to optimally design, construct, and maintain projects to meet the stated flood control and environmental goals

Objectives:

- Develop guidance, procedures, and methods to conduct systematic and appropriately scoped geomorphic assessments
  - Determine characteristics of geomorphic assessments
  - Develop a conceptual geomorphic assessment procedure
  - Apply procedure to several projects at different scopes
  - Revise assessment procedure and make it applicable to USACE projects

US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Work Unit Funding Profile:

FY03	FY04	FY05	FY06	Total
$125k	$150k	$150k	$0k	$425k

US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Business Program/Missions Areas Supported:

- Inland Navigation __ %
- Coastal Navigation __ %
- Coastal Storm Damage Reduction 40 %
- Inland Flood Control/Damage Reduction 40 %
- Environmental Protection & Quality 20 %
- Multi-Purpose (Hydropower, Rec & Water Supply) __ %
- Emergency Management __ %
- Regulatory __ %
- Support for Others __ %

(Must to add to 100%) Total: 100 %

US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

CW Strategic Goals Check List: (check if applies)

- Provide sustainable water resources development & mgmt _X_
- Restore past environment degradation ___
- Provide project services of high quality _X_
- Reduce losses from natural & manmade hazards _X_
- Supports being a world class technical leader _X_
- Addresses strategic or system needs in a framework or integrated approach by developing:
  - Methods or decision support tools _X_
  - Technology to improve life cycle productivity _X_
  - Technology to monitor systems, provide feedback and develop operating guidance ___

US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Which “short term” field needs does this support:

- Improved guidance to conduct geomorphic assessments as part of the planning and design phase of flood damage reduction projects
- Preserve and enhance environmental quality through appropriate application of geomorphic assessments
- Improve project-level decision-making
- Reduce life-cycle costs

Field Review Group Relative Ranking:

- FRG planned 21-22 Aug 2002

US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Listening Sessions Check List: (check if applies)

- Improves data sharing/exchange with the public in these areas:
  - Provides one stop shop for maps & data for basin wide planning ___
  - Provides data to make informed decisions _X_
  - Provides a system for basin wide planning _X_
  - Provides information about what is happening at Corps facilities ___ (up to date web sites)
- Tech Transfer plan to include educating the public _X
- Coordinate research, models, analysis with regulatory agencies to insure results will be accepted _X_
- Develop R&D products:
  - For watershed management plans, not just at the project level _X_
  - To include aesthetics as components of all projects ___
- Create better models for ground & surface water ___

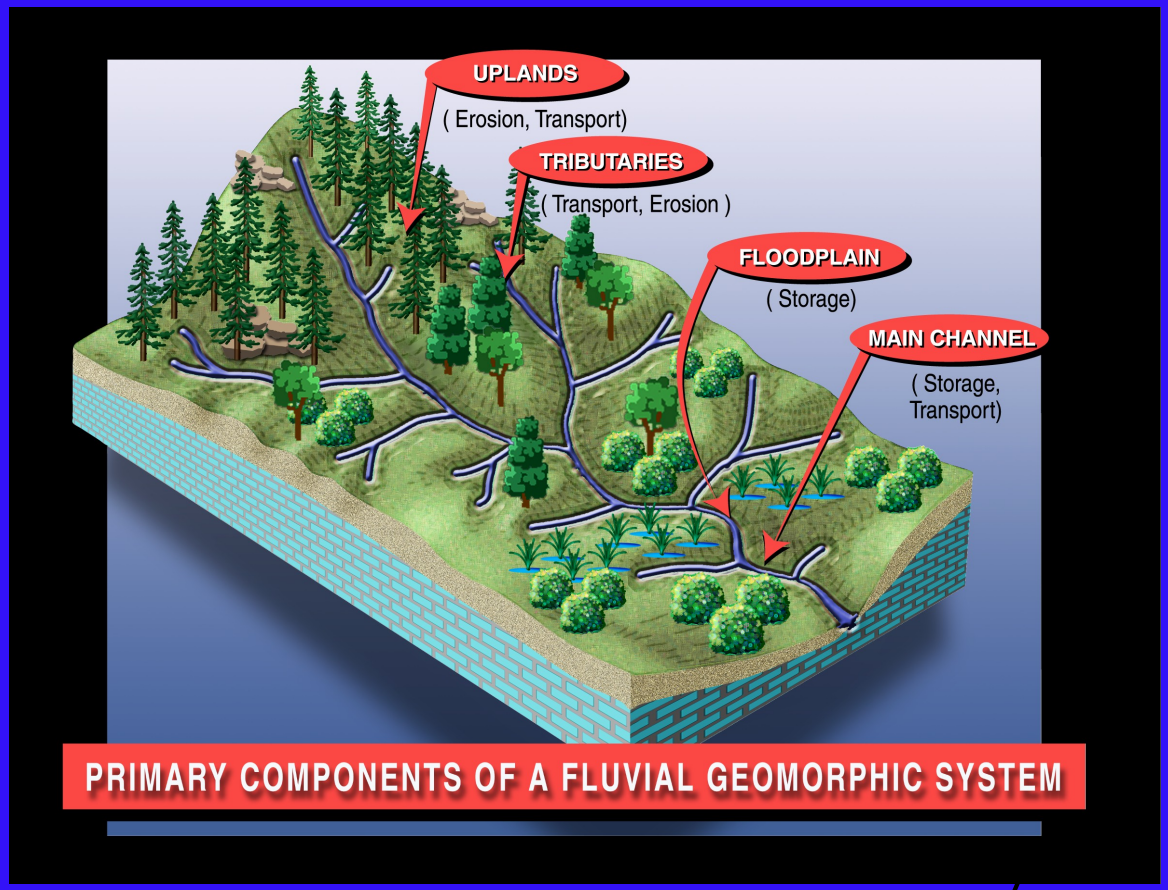
US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Products:

- EM on geomorphic assessment procedure
- Geomorphic assessments on selected large and small project
- Website



US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Benefits

- Direct:
  - Complete and standardized procedures to conduct geomorphic assessments
    - Efficient identification of appropriate methods and required data
    - Provides definition of critical design elements and recommendation for optimal design
  - Reduced costs
  - Quicker project completion times
- Indirect:
  - Leverage data and analyses
  - Long-term environmental benefits

US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Technology Transfer Plan:

- Quarterly summaries and geomorphic assessment results posted on TOWNS website
- Conduct workshops and working group meetings
- Technical Report

US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Geomorphic Assessments for Urban Flood Damage Reduction

Why should the Corps fund this R&D, instead of private industry and/or others:

- Watershed system analysis for flood control is primarily a government responsibility, thus there is little incentive for others to pursue this research

What is Impact if not started:

- Continued degradation of infrastructure due to channel failures during floods, increasing recovery costs